What is claimed is:

1. An inkjet recording device comprising:

a plurality of nozzles for ejecting ink droplets;

a first signal generator that generates a recording ejection signal, wherein the nozzles selectively eject a recording ink droplet in response to the recording ejection signal;

a changing unit that, during a frequency changing period, temporarily changes an ejection frequency that is common to all of the nozzles;

a second signal generator that generates a refresh ejection signal during the frequency changing period, wherein the nozzles selectively eject a refresh ink droplet in response to the refresh ejection signal;

an electric field generator that generates an electric field for deflecting the refresh ink droplet; and

an ink collector that collects the deflected refresh ink droplet.

2. The inkjet recording device according to claim 1, wherein the recording ejection signal includes a recording analog signal and a recording digital signal, and the refresh ejection signal includes a refresh analog signal and a refresh digital signal, the refresh digital signal having a lower voltage than the recording digital signal.

3. The inkjet recording device according to claim 1,

wherein the first signal generator generates the recording ejection signal during the frequency changing period, and the electric field deflects at least one recording ink droplet that is ejected during the frequency changing period to impinge on a recording medium.

4. The inkjet recording device according to claim 3, further comprising a transport unit that transports a recording medium in a predetermined direction, wherein the electric field deflects the at least one recording ink droplet in the predetermined direction.

5. The inkjet recording device according to claim 4, wherein the changing unit temporarily increases the ejection frequency during the frequency changing period.

6. The inkjet recording device according to claim 1, wherein the electric field generator includes an electrode and a signal applicator, the signal applicator applying a common electric field signal to the electrode, the common electric field signal reducing in its voltage value in at least one of a stepwise manner and a continuous manner after the refresh ink droplet is ejected.

7. The inkjet recording device according to claim 1, wherein the changing unit temporarily changes the ejection frequency at an optional timing.

8. The inkjet recording device according to claim 1, wherein the changing unit generates a synchronization signal,

the first signal generator and the second signal generator generate the recording ejection signal and the refresh ejection signal, respectively, in synchronization with the synchronization signal, and the changing unit temporarily changes the ejection frequency by temporarily changing generation timing of the synchronization signal.